

Title (en)  
METHOD AND APPARATUS FOR REMOVING A SEMICONDUCTOR CHIP FROM A SUBSTRATE

Publication  
**EP 0028700 B1 19830504 (EN)**

Application  
**EP 80105796 A 19800925**

Priority  
US 9332179 A 19791113

Abstract (en)  
[origin: US4274576A] A semiconductor chip mounted on a substrate by solder columns connecting one side of the chip to the substrate, is removed from the substrate by cooling the unconnected side of the chip to embrittle the solder columns and then twisting the chip with small angle rotational motion to shear the columns at their midpoints. A mechanism for cooling and rotating the chip makes use of the cooling substance to minimize the contact of the substrate with the cooling substance.

IPC 1-7  
**H01L 21/60**

IPC 8 full level  
**H01L 21/60** (2006.01); **H05K 13/04** (2006.01)

CPC (source: EP US)  
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